Group Art Unit: 1807



40399/119/WIHD

IN THE UNITED STATES PAYENT AND TRADEMARK OFFICE

In re-patent application of

Natsui, et al.

Serial No. 07/915,884

Filed: July 20, 1992

Examiner: Marschel, A.

Por: TYPE a PLATELET-DERIVED GROWTH

FACTOR RECEPTOR GENE

CCT 12 1994

# DECLARATION UNDER 17 CVR 51.112

The Honorable Commissioner of Patents and Trademarks Washington, D.C. 20231

sir:

- I, Donald P. Bottaro, being duly warned, hereby declare and Say:
- 1. I hold the degree of Ph.D. and am currently employed at the National Cancer Institute, the National Institute of Health. I have worked in the field of growth factor/receptor interaction since 1985. My curriculum vitae is attached as Exhibit A.
- I have reviewed U.S. patent application Serial No. 07/915,884, entitled "Type a Platelet-Derived Growth Factor Receptor Gene" ("the application"). considered the data presented in Figure 11 and the description of these data on page 52 of the specification.
- 3. Figure 11 is a saturation curve depicting the saturable binding of Platelet Derived Growth Factor ("PDGF") AB or PDGF BB with PDGF  $\alpha$  or PDGF  $\beta$  receptors on human D32 cells. The large graph shows that as more PDGF is added, binding continues to increase until a plateau is reached. The inset in this figure

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shows the same data, replotted in the standard Scatchard format.

- 4. Based upon my experience in preparing and using the type of data presented in Figure 11, I would interpret these data as showing that a platelet derived growth factor receptor protein binds the AB and BB force of PDGF with equivalent affinity. Binding affinity can be estimated from a scatchard graph. The slopes of the lines drawn through the various points indicate a high binding affinity relative to other known growth factors. At page 52 of the application, the applicants state that binding affinities expressed in terms of K were 0.4 nM and 0.5 nM for PDGF a receptor and PDGF  $\beta$  receptor cells, respectively. The believe that these K values indicate high binding affinities, relative to other known growth factors.
- 5. I further declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements and the like so made may jeopardize the validity of this declaration, the subject application and any patent issuing thereon.

Date 94

Donald P. Bottaro, Ph.D.

## October 1994

#### CURRICULUM VITAE

Name: Donald Paul BOTTARO

Date and Place of Birth: August 22, 1956; Bridgeport, CT

Citizenship: United States

Marital Status: Married

Education:

1978 1986

B.A. (Biology), The University of Chicago, Chicago, IL Ph.D. (Cell and Molecular Biology), Boston University,

Boston, MA

Brief Chronology of Employment:

1985 - 1987 Research Fellow, Elliott P. Joslin Research Laboratory,

Joslin Diabetes Center, Department of Medicine,

Harvard Medical School, Boston, MA

1987 - 1990 Intramural Research Training Fellow,

Laboratory of Cellular and Molecular Biology,

National Cancer Institute, Bethesda, MD

1990 - Senior Staff Fellow,

Laboratory of Cellular and Molecular Biology,

National Cancer Institute, Bethesda, MD

Honors and Other Special Scientific Recognition:

1980 - 1984 Teaching Fellowship, Graduate School of Arts and

Sciences, Boston University

1983 Dean's Award, Graduate School of Arts and Sciences,

Boston University

1985 Graduate Scholarship, Graduate School of Arts and

Sciences, Boston University

1986 Young Investigator of the Year, American

Microcirculatory Society

1987 National Research Service Award, U. S. Public Health

Service (Declined in favor of IRTA Fellowship)

1989 Foundation for Advanced Education in the Sciences

Travel Award, 7th International Conference on Cyclic Nucleotides, Calcium, and Protein Phosphorylation.

October 8-13, Kobe, Japan.

Honors and Other Special Scientific Recognition (cont'd):

1993

Federal Technology Transfer Award, NCI

1994

Federal Technology Transfer Award, NCI

Societies:

American Association for the Advancement of Science American Society for Cell Biology

Research Interests:

Signal transduction by growth factors and hormones

Patents:

Aaronson S.A., Ishibashi T., Bottaro D.P., and Miki T. U.S. Patent Pending Application No. 7/988,273: Expression Cloning of a Human Phosphatase.

Bottaro, D.P., Rubin, J.S., and Aaronson, S.A. U.S. Patent Pending Application No. 8/059,030: KGF Receptor-Derived Antagonists of KGF Binding.

Bottaro D.F., Rubin J.S., Faletto D.L., Chan A.M-L., Vande Woude G., and Aaronson S.A. U.S. Patent Pending Application No. 7/642,971: Hepatocyte Growth Factor Receptor is the met Proto-Oncogene.

Chan A.M-L., Rubin J.S., Bottaro D.P., and Aaronson S.A. U.S. Patent Pending Application No. 7/655,502: A Non-Mitogenic Competitive HGF Antagonist.

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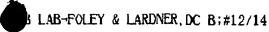
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